ROYAL PHARMACEUTICAL SOCIETY

Hospital pharmacy benchmarking metrics – RPS definitions for use by hospital pharmacy teams

Why the definitions:

- There is currently inconsistency in the way that acute hospitals measure performance when benchmarking.
- RPS through its Hospital Expert Advisory Group (HEAG) has developed a consensus on definitions for benchmarking metrics relevant to acute hospitals.
- The aim is to provide a consistent basis for the collection of data which will allow acute hospitals to benchmark performance against each other most effectively.
- The definitions should help identify unwarranted variation; there will always be warranted variation across hospitals.
- Definitions look to use existing data sources where possible rather than adding to the burden of data collection. It is acknowledged that this may occasionally lead to compromise in detail/accuracy.

Out of scope:

- Defining the target range for the metrics
- Accounting for all local variations in service provision (warranted variation); definitions are national and need to be broadly fit for purpose.

Next steps:

- RPS and other regional and national pharmacy networks to circulate the metrics widely to Chief Pharmacists/Directors of Pharmacy across GB to stimulate adoption of the definitions.
- The RPS HEAG to continue identifying and developing further definitions to support the profession in consistent benchmarking.
- Comments or suggestions for additional definitions can be directed to Cathy Picton (catherinepicton@t-online.de).

1. METRIC = average number of days medicines stock physically held by pharmacy

INTERPRETATION

= processing efficiency of the pharmacy – lower figure is good, but if too low then will increase transactional costs and risk of stock outs i.e. needs to be balanced against other metrics.

Note: use the NPPSC* definition: include all stock holding locations for which the Chief Pharmacist/Director of Pharmacy is accountable (satellite dispensaries, aseptic units etc.). Exclude outsourced out-patient dispensaries and 'stand-alone' production and pre-packing units etc. Include VAT.

**NPPSC = National Pharmacy Procurement Specialists Committee*

PROPOSED DEFINITION

Calculation = 365/stock turn figure (see below)

Stock turn figure = (Annual Hospital Medicines Expenditure minus any expenditure unrelated to/not directly handled by hospital pharmacy e.g. outsourced out-patients, inventory delivered directly to/held on wards, clinics etc, annual homecare expenditure, FP(10) costs) ÷ (year-end pharmacy store stock holding figure).

COMMENTS

The figure for this metric would generally be expected to be a range and hospitals will want to compare with similar peers.

2. METRIC = average number of days medicines stock held (whole system)

INTERPRETATION

= effectiveness of pharmacy procurement system in minimising physical store involvement – lower figure is good, but if too low then will increase transactional costs and risk of stock outs i.e. needs to be balanced against other metrics.

PROPOSED DEFINITION

Calculation = 365/stock turn figure (see below)

Stock turn figure = (Annual Hospital Medicines Expenditure) ÷ (year-end pharmacy stock holding figure)

COMMENTS

Used as a comparator to metric 1. Offers 2 stock holding options as metrics – each would have its own target defined. Ideally metric 1 is low and metric 2 relatively lower. The greater the relative difference the more effective the system as most stock bypasses a physical pharmacy store.

3. METRIC = percentage of orders sent electronically (e-trading)

INTERPRETATION

= processing efficiency of the pharmacy procurement system – high figure is good.

PROPOSED DEFINITION

E-trading of orders is the process whereby orders are sent directly from the purchaser's computer system to the supplier's computer system by electronic means. No paper is involved in these transactions which take place electronically and without manual transcription. This excludes fax or e-mailing of orders from the numerator.

Calculation = (number of orders sent electronically) ÷ (total number of orders created in the same time period) – expressed as a percentage.

Note: it is the number of orders and not the value of orders.

This calculation should be done for (a) all orders sent including homecare and (b) all orders excluding homecare.

It is recognised that a metric that looks at the number of **lines ordered**, rather than the number of orders, would be more useful, whilst at present it is not possible to measure this easily organisations should be working toward this.

4. METRIC = percentage of invoices processed electronically (e-trading)

INTERPRETATION

= processing efficiency of the pharmacy procurement system – high figure is good.

PROPOSED DEFINITION

E-trading of invoices is the process whereby invoices are sent directly from the supplier's computer system to the purchaser's computer system by electronic means. No paper is involved in these transactions which take place electronically and without manual transcription. This excludes fax or e-mailing of invoices from the numerator. It is expected that a PEPPOL compliant eCommerce system is used.

Calculation = number of invoices processed electronically/total number of invoices processed in the same time period – expressed as a percentage.

Note: it is the number of invoices and not the value of invoices.

It is recognised that a metric that looks at the number of **lines ordered**, rather than the number of orders, would be more useful, whilst at present it is not possible to measure this easily organisations should be working toward this.

This calculation should be done for (a) all invoices processed including homecare and (b) all invoices excluding homecare.

5. POINT OF GUIDANCE = % pharmacy store inventory which are not medicines

As a general principle pharmacy stores should only hold medicines and products used as medicines. Holding products not used as medicines (e.g. enteral feeds, dressings) should generally be viewed as non-value adding; if there are exceptions these should be supported with a clear rationale.

6. METRIC = % of pharmacists registered for over three years who are also qualified as prescribers

INTERPRETATION

= an indicator of ambition of pharmacy service to be core clinical; modified denominator accounts for pharmacists who are not eligible to access prescribing training; larger figure better.

PROPOSED DEFINITION

Calculation = (number of pharmacists qualified as prescribers) ÷ (total number of pharmacists in service who have been registered a minimum of 3 years) – expressed as a percentage

* Note this is calculated per head-count as oppose WTE.

7. METRIC = % of qualified pharmacist prescribers routinely prescribing

INTERPRETATION

Interpretation = an indicator of how well developed pharmacy service is in terms of being core-clinical.

PROPOSED DEFINITION

Calculation = (number of pharmacists qualified as prescribers who routinely prescribe as part of their clinical role) ÷ (total number of pharmacists in service who are qualified to prescribe) – expressed as a percentage.

It is accepted that the term 'routinely' can be open to interpretation plus it is not easy to put a general value to this. However, the principle is that prescribing is part of the pharmacist's routine clinical practice i.e. the pharmacist will typically prescribe when working in their clinical role; compared with prescribing only occasionally or rarely which would not be routine.

8. METRIC = Medicines reconciliation by pharmacy team within 24 hours of admission

INTERPRETATION

= indicator of extent of pharmacy medicines optimisation practice that is targeted at admission

PROPOSED DEFINITION

Calculation = (number of patients admitted, electively AND non-electively, who have their medicines reconciled by a member of the pharmacy team within 24 hours of the time of admission) ÷ (total number of patients within sample). Sampled monthly as per medicines safety thermometer (100% of patients; admissions during previous 24 hours; last Wednesday of the month). Expressed as a percentage.

COMMENTS

The metric uses the National Institute for Heath and Clinical Excellence (NICE) definition of medicines reconciliation.

For the purpose of this definition, medicines reconciliation is considered complete once the changes have been communicated to the prescriber. However the longer term aspiration is to amend the definition so that medicines reconciliation is complete only when discrepancies are corrected.

Admission is considered to be from the time the decision is taken to admit (not from the day after admission).

This metric is a measurement of the extent of pharmacy team medicines reconciliation, it is recognised that in some organisations other clinical staff may also undertake medicines reconciliation. Where this happens pharmacy should have a programme of training and competency assessment in place to oversee the medicines reconciliation process.

9. METRIC = % patients experiencing an omission of a critical medicine

INTERPRETATION

= an important indicator of overall quality of medicines use within an organisation. Lower value better.

It is accepted that this metric reflects many things including:

- quality and responsiveness of medicines supply system pertaining to inpatient care;

- nurse/doctor awareness of the importance of administration of critical medicines and related behaviours (e.g. willingness of nurses to source medicines if not available; timing of doctor's prescribing in relation to ward routines);
- the robustness of the medicines management system within a complex organisation to deal with variation e.g. how medicines are managed when patients are transferred.

PROPOSED DEFINITION

Calculation: number of patients with an omitted dose of a critical medicine (as defined by medicines safety thermometer) ÷ (total number of patients within same sample from metric 8).

Note: the numerator should exclude omissions due to patient refusal or valid clinical reason for omission – this is different to medicines safety thermometer (but efforts are underway to standardise). Expressed as a percentage.